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## **A mental health needs assessment of children and adolescents in post-conflict Liberia: results from a quantitative key-informant survey**

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Between 1989 and 2004, Liberia experienced a devastating civil war that resulted in widespread trauma with almost no mental health infrastructure to help citizens cope. In 2009, the Liberian Ministry of Health and Social Welfare collaborated with researchers from Massachusetts General Hospital to conduct a rapid needs assessment survey in Liberia with local key informants ( $n = 171$ ) to examine the impact of war and post-war events on emotional and behavioral problems of, functional limitations of, and appropriate treatment settings for Liberian youth aged 5–22. War exposure and post-conflict sexual violence, poverty, infectious disease and parental death negatively impacted youth mental health. Key informants perceived that youth displayed internalizing and externalizing symptoms and mental health-related functional impairment at home, school, work and in relationships. Medical clinics were identified as the most appropriate setting for mental health services. Youth in Liberia continue to endure the harsh social, economic and material conditions of everyday life in a protracted post-conflict state, and have significant mental health needs. Their observed functional impairment due to mental health issues further limited their access to protective factors such as education, employment and positive social relationships. Results from this study informed Liberia's first post-conflict mental health policy.

**Keywords:** post-conflict Liberia; mental health; needs assessment; youth; policy

### **Introduction**

There continues to be a large treatment gap for mental health needs in low- and middle-income countries (LMICs) despite recent increases in scientific and governmental attention and attempts to address this disparity (Eaton et al., 2011). Low- and middle-income countries face many barriers when attempting to scale up

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mental health services, including lack of resources, lack of strong governmental mental health policies and inadequate education for mental health clinicians. The treatment gap is especially harmful to children and adolescents, who comprise up to 50% of the population in LMICs and are especially vulnerable to mental health problems that can affect their development, hindering their wellbeing and productivity throughout their lives (Kielsing et al., 2011).

Mental health needs are exacerbated by direct and indirect negative outcomes of civil wars, which have had a major impact in parts of Africa (Amowitz et al., 2002; Johnson et al., 2010; Pham, Weinstein, & Longman, 2004; Vinck, Pham, Stover, & Weinstein, 2007). These wars have brought with them damage to vital infrastructure, including schools and health services, and have had a profound impact on the physical and psychological wellbeing of the people who suffered through them. In terms of physical health, many survivors of war have reported being tortured, blinded, starved and beaten (Stepakoff et al., 2006). Psychological trauma is also frequently experienced during war and has been shown to manifest itself in many forms, including in acute stress disorder (Cohen, 2008), separation anxiety disorder (Silove, Momartin, Marnane, Steel, & Manicavasagar, 2010), post-traumatic stress disorder (PTSD) (Carlson & Rosser-Hogan, 1991; Cheung, 1994; Sonis et al., 2009; Vinck et al., 2007) and clinical depression (Carlson & Rosser-Hogan, 1991). Furthermore, social bonds within communities and families are often broken, exacerbating emotional and behavioral problems (Betancourt, McBain, Newnham, & Brennan, 2014).

Children are particularly vulnerable to the negative effects of conflict, as war-related trauma has been linked to a higher prevalence of mental disorders, which can hinder their development and lead to decreased functioning in their adult lives (Werner, 2012). Moreover, the stability and safety of the post-conflict environment may mitigate or aggravate youth emotional or behavioral problems stemming from armed conflict. Research from several post-conflict societies has found that mental health problems, functional impairment and psychosocial adjustment are not only impacted by exposure to traumatic events, but also by post-conflict school attendance, community acceptance, family support and economic opportunities (Bayer, Klasen, & Adam, 2007; Betancourt, Borisova, et al., 2010; Betancourt, Brennan, Rubin-Smith, Fitzmaurice, & Gilman, 2010; Betancourt, McBain, Newnham, & Brennan, 2013; Klasen, Oettingen, Daniels, & Adam, 2010; Kohrt et al., 2008).

Between 1989 and 2004, Liberia experienced a devastating civil war marked by widespread abuses against humanity, ethnic killings and the use of male, female and child combatants. Boys and girls as young as 10 years old were forced to join fighting forces to become slaves, bush wives, cooks, fighters or commanders (Johnson et al., 2008; Medeiros, 2007). More than 240,000 Liberians died during the course of the conflict, almost all citizens were displaced from their homes at least once, and most people experienced tremendous loss. Public structures, government, health and educational systems collapsed (United Nations, 2003). A previous population-based study on the prevalence and impact of war-related psychosocial trauma in adults aged 18 years or older in post-conflict Liberia documented significantly high rates of serious physical injuries, low educational attainment, sexual violence, substance abuse, depressive symptoms, PTSD, suicidal ideation and social dysfunction among female and male former combatants (Johnson et al., 2008). Furthermore, former adult combatants and non-combatants reported that the most needed services

included medical care, education and vocational or skills training; moreover, while most individuals expressed a need for mental health care, the majority found such services inaccessible (Johnson et al., 2008).

Recent studies have found that Liberian youth are coping with a number of war-related mental health problems including substance abuse, hopelessness and suicidal ideation, but face challenges due to a lack of infrastructure and support and unwillingness to accept help (Dominguez et al., 2013). They often turn to survival strategies such as adultification and selling petty trade and sex, which may systematically exacerbate trauma-related problems, rather than help ameliorate them. Researchers have found that some Liberians believe mental health services such as counseling, education and skills training would be beneficial to youth, but that human and physical resources are insufficient to implement these services (Levey et al., 2013). Another study that specifically examined methods to reintegrate former child soldiers into Liberian society found that educational support, skill acquisition and family reunification are hindered by lack of government funding and weak economic capacity of families to support children (Awodola, 2012). Such studies highlight the need for increased allocation of resources to mental health services in Liberia.

In 2009, the Liberian Ministry of Health and Social Welfare (MOHSW) sought to develop a mental health policy through the process of a needs assessment to address the needs of the community, specifically of Liberian youth. In general, a needs assessment consists of a systematic process of collecting information and data analysis regarding the type, depth and scope of a problem (Rossi & Freeman, 1993). Needs assessments are also helpful when prioritizing the many factors required to rebuild a society after a conflict (Saxena et al., 2007) and represent a cost-effective way to ascertain priorities on a diverse range of issues. A rapid needs assessment is conducted quickly, usually over the course of several days and up to six weeks, in order to develop a preliminary understanding of a situation in a fast manner (Bamberger, Rugh, & Mabry, 2012).

Given limited time and resources, the investigators chose to implement a rapid needs assessment using key informants (KIs) in the community to understand the mental health priority areas for Liberian youth in the post-conflict environment. Specifically, we sought to examine KIs' assessment of the emotional impact of war and non-war related traumatic events, current major problems and challenges, functional limitations and possible venues for treatment provision for youth in Liberia. The data were used to inform Liberia's comprehensive, community-based national mental health policy (Republic of Liberia Ministry of Health and Social Welfare, 2009), which was enacted in 2009.

## **Methods**

### ***Sample***

This research is a quantitative cross-sectional needs assessment, focused on the mental health needs of Liberian youth. The study was conducted between March 30 and April 30, 2009, with 171 local KIs. A qualitative study using the same sample has been published previously (Dominguez et al., 2013; Levey et al., 2013). Researchers from the Massachusetts General Hospital (MGH)/Harvard Medical School collaborated with the Liberian MOHSW and Mother Patern College of Health Sciences School

of Social Work (Mother Patern) to produce and analyze the survey. The MOHSW and local non-governmental organizations (NGOs) identified 171 KIs who had a history of working with youth in Liberia and had lived in Liberia for an extended period of time (Mean = 37.3 years, SD =14.9). All 171 KIs who were identified by the MOHSW and local NGOs agreed to participate in the study. The KIs included professionals in the health sector, such as physicians, nurses, social workers, physician assistants, midwives, counselors and traditional healers, primary and secondary school teachers, and government, NGO, United Nations and World Health Organization employees. Key informants were selected from a range of counties in Liberia.

### ***Data collection training***

Researchers from MGH trained 21 Liberian social work students from Mother Patern as data collectors. Training took place between February and March of 2009 and included classroom teaching followed by field observation. Data collectors were taught survey administration, qualitative and quantitative data collection techniques and research ethics, including confidentiality and privacy.

### ***Study measures***

The survey instrument included questions on participants' sociodemographic characteristics such as age, gender, professional degrees and nationality. The survey sought to assess the KIs response on four domains of mental health among Liberian children (aged 5–12), adolescents (13–18) and young adults (19–22): (1) emotional impact of a series of potentially traumatic events during the past 20 years (encompassing the time during the civil war) and in the past year (the immediate post-conflict period); (2) frequency of cognitive, emotional and behavioral problems; (3) severity of psychosocial limitations in interpersonal, educational and occupational areas of functioning; and (4) the appropriate treatment setting for mental health care.

Survey items were measured via a 5-point Likert scale (0 = not at all to 4 = extremely) rating the frequency of such events. Study participants were given the definition of mental health as a 'state of healthy well-being in which young Liberians can realize their own abilities, interact positively with others, cope with the stressors of life, and contribute to the development of a productive future for themselves and their families'. The instrument was written in English and was based on those used in similar studies conducted by researchers in other post-conflict countries. It was also designed with input from the one practicing psychiatrist in Liberia, the mental health policy committee in the MOHSW and other in-country health professionals, with whom the researchers regularly communicated to ensure that each question was culturally appropriate and that the instrument included behaviors and culturally-based manifestations of distress. The survey was pilot tested with 20 participants who provided feedback on clarity and cultural and linguistic appropriateness. The instrument was revised based on the pilot test.

Ethical approval was obtained from the review boards of Partners Human Research Committee and the Liberian MOHSW. Written informed consent was obtained from all participants. Every effort was made to ensure protection and confidentiality of the participants. Although participants' personal information was recorded for follow-up for missing information, all identifying information that

linked the questionnaire with the response was removed prior to analysis. Participants did not receive any compensation for participating in the study. They were informed that participation and lack thereof would not affect them directly, and that they could withdraw consent or stop participating at any time. Participants were explicitly given the right to refuse participation. All KI interviews were conducted in English. All surveys were reviewed for completeness and missing information.

### **Data analysis**

The descriptive data was analyzed using the Statistical Package for the Social Sciences version 17. Frequencies (%) and means (SD) were computed to derive sociodemographic characteristics.

### **Results**

Sociodemographic characteristics of the KIs are shown in [Table 1](#). Of the sample population of respondents ( $n = 171$ ), nearly two-thirds (64.3%) were male. The average age was 43.8 years,  $\pm 9.5$  years. The majority of KIs were Liberian (94.7%), with the remaining respondents reporting their nationality as Other (1.8%), American or British (1.2% each) or Spanish or South African Dutch (0.6% each). The majority of the respondents lived in Montserrado county (64.9%), Bong county (5.8%) and Grand Bassa (4.7%) and the majority worked in the health sector (62.6%).

The potentially traumatic events during the civil war years (the past 20 years) that the KIs rated as having the most detrimental emotional impact on Liberian youth were conflict/war stress ( $M = 3.63$ ,  $SD = .60$ ), poverty ( $M = 3.55$ ,  $SD = .65$ ), sexual violence ( $M = 3.54$ ,  $SD = .71$ ), exposure to extreme and/or prolonged fear ( $M = 3.46$ ,  $SD = 0.78$ ) and witnessing atrocities ( $M = 3.44$ ,  $SD = 0.74$ ). In contrast, the most emotionally disturbing potentially traumatic events during the past year were sexual violence ( $M = 3.05$ ,  $SD = .93$ ), poverty ( $M = 2.84$ ,  $SD = .95$ ), infectious disease ( $M = 2.63$ ,  $SD = 1.05$ ), domestic violence ( $M = 2.57$ ,  $SD = 1.02$ ) and death of parents ( $M = 2.19$ ,  $SD = 1.12$ ) ([Table 2](#)).

Key informants were also asked to rate what they perceived as the major behavioral and emotional problems affecting young Liberians in 2009. The highest rated problems displayed by children (aged 5–12) were poor concentration ( $M = 2.77$ ,  $SD = .91$ ), delinquent behavior ( $M = 2.74$ ,  $SD = .91$ ), lack of motivation ( $M = 2.69$ ,  $SD = 1.03$ ), bullying others ( $M = 2.52$ ,  $SD = 1.00$ ) and alcohol use ( $M = 2.42$ ,  $SD = 1.17$ ). The highest rated problems for adolescents and young adults (aged 13–22) were alcohol use ( $M = 3.42$ ,  $SD = .76$ ), drug use ( $M = 3.29$ ,  $SD = .81$ ), delinquent behavior ( $M = 3.14$ ,  $SD = .83$ ), suicidal thoughts ( $M = 2.89$ ,  $SD = 0.98$ ) and poor concentration ( $M = 2.77$ ,  $SD = 0.98$ ) ([Table 3](#)).

Not surprisingly, KIs' assessment of functional limitations varied significantly between children (aged 5–12) and adolescents/young adults (aged 13–22) in post-conflict Liberia. Key informants reported that children had the most difficulty with housework ( $M = 2.83$ ,  $SD = 0.95$ ), school achievement ( $M = 2.80$ ,  $SD = 0.95$ ), school attendance ( $M = 2.74$ ,  $SD = 0.94$ ), learning ( $M = 2.63$ ,  $SD = 0.98$ ) and getting enough food ( $M = 2.54$ ,  $SD = 1.02$ ). The greatest limitations noted among adolescents and young adults were challenges with having income/living expenses ( $M = 3.15$ ,  $SD = 0.95$ ), marriage problems ( $M = 3.04$ ,  $SD = 0.99$ ), parenting ( $M = 3.02$ ,  $SD = 0.88$ ),

Table 1. Sociodemographics of Liberian key informants ( $n = 171$ ).

Characteristic	<i>N</i> (%)	Mean (SD)
Age		43.8 (9.5)
Sex		
Male	110 (64)	
Female	61 (36)	
Years in Liberia		37.3 (14.9)
Nationality		
Liberian	162 (94.7)	
Other	3 (1.8)	
American	2 (1.2)	
British	2 (1.2)	
Spanish	1 (0.6)	
South African Dutch	1 (0.6)	
Sector <sup>a</sup>		
Health field worker <sup>b</sup>	107 (62.6)	
NGO/CSO <sup>c</sup>	66 (38.6)	
Practicing clinician <sup>d</sup>		
Government employee	65 (38.0)	
Educator	62 (36.3)	
Traditional healer	37 (21.6)	
Degree	4 (2.3)	
Bachelors degree (4 year college degree) <sup>e</sup>	41 (24.0)	
Other/not specified	21 (12.3)	
Social worker (BSW, AASW, MSW)	20 (11.7)	
Master's degree <sup>e</sup>	17 (9.9)	
Medical doctor (MD)	15 (8.8)	
Registered nurse (RN)	14 (8.2)	
Certificate (not specified)	12 (7.0)	
Physicians assistant	9 (5.3)	
Associates degree (2 year college degree) <sup>e</sup>	6 (3.5)	
Law degree (JD)	4 (2.3)	
Counselor	3 (1.8)	
None	3 (1.8)	
Current university student	2 (1.2)	
High school diploma	2 (1.2)	
Certified midwife	1 (0.6)	
PhD	1 (0.6)	

Notes: Due to rounding, percents may not equal 100.

<sup>a</sup> Percent > 100 due to respondents working in multiple sectors

<sup>b</sup> Includes all administrators and non-governmental organization workers who specified their involvement with health related activities. It does not include all social workers.

<sup>c</sup> NGO: non-governmental organization; CSO: civil society organization; Includes all United Nations and World Health Organization employees

<sup>d</sup> Represents those whose key role included clinical practice. It does not represent all informants with a clinical degree.

<sup>e</sup> Bachelor, master and associate degrees that are non-health specified.

Table 2. Potentially traumatic events rated as having the most negative emotional impact on Liberian youth ( $n = 171$ ).

Event	Past year <sup>a</sup> Mean (SD)	Event	Past 20 years <sup>b</sup> Mean (SD)
Sexual violence	3.05 (0.93)	Conflict/war stress*	3.63 (0.60)
Poverty	2.84 (0.95)	Poverty	3.55 (0.65)
Infectious disease	2.63 (1.05)	Sexual violence	3.54 (0.71)
Domestic violence	2.57 (1.02)	Exposed to extreme and/or prolonged fear	3.46 (0.78)
Death of parents	2.19 (1.12)	Witnessing atrocities	3.44 (0.74)
Early marriage	2.19 (1.17)	Separation from parents	3.33 (0.71)
Neglect by parents/ guardians	2.18 (1.04)	Death of parents	3.30 (0.70)
Loss of home	2.08 (1.12)	Loss of home	3.26 (0.75)
Starvation	2.04 (1.01)	Starvation	3.20 (0.79)
Death of siblings	1.99 (1.05)	Domestic violence	3.11 (0.84)

Notes: <sup>a</sup> Likert scale response to question ‘How would you rate the following events in terms of their emotional impact on young people in Liberia in the past year?’ Response options were 0 = not at all; 1 = a little; 2 = somewhat; 3 = quite a lot; 4 = extremely.

<sup>b</sup> Likert scale response to question ‘How would you rate the following events in terms of their emotional impact on young people in Liberia in the past 20 years?’ Response options were 0 = not at all; 1 = a little; 2 = somewhat; 3 = quite a lot; 4 = extremely.

\*Conflict/war stress refers to experiences that were directly from the war. These are defined as exposure to the direct and indirect effects of extreme violence, social disruption and economic destruction associated with civil conflict, including but not limited to events such as genocide, forced displacement, destruction of property and food insecurity. Items such as torture, death of siblings could have occurred outside of the conflict.

Table 3. Emotional and behavioral problems rated as occurring with the most frequency in Liberian youth ( $n = 171$ ).<sup>a</sup>

Children (aged 5–12)		Adolescents/young adults (aged 13–22)	
Problem	Mean (SD)	Problem	Mean (SD)
Poor concentration	2.77 (0.91)	Alcohol use	3.42 (0.76)
Delinquent behavior	2.74 (0.91)	Drug use	3.29 (0.81)
Lack of motivation	2.69 (1.03)	Delinquent behavior	3.14 (0.83)
Bullying others	2.52 (1.00)	Suicidal thoughts	2.89 (0.98)
Alcohol use	2.42 (1.17)	Poor concentration	2.77 (0.98)
Sadness/depression	2.35 (1.10)	Bullying others	2.70 (1.00)
Crying easily	2.22 (0.95)	Hopelessness about the future	2.65 (1.05)
Body complaints	2.10 (1.00)	Lack of motivation	2.61 (1.18)
Drug use	2.06 (1.30)	Nervous/worrying	2.42 (1.13)
Lack of energy	2.02 (1.14)	Dangerous to others	2.37 (1.09)

Notes: <sup>a</sup> Likert scale response to question ‘How common are each of the following problems among children in Liberia?’ Response options were 0 = not at all; 1 = a little; 2 = somewhat; 3 = quite a lot; 4 = extremely.

fulfilling their roles within the family ( $M = 2.83$ ,  $SD = 0.97$ ) and vocational skills ( $M = 2.73$ ,  $SD = 1.11$ ) (see Table 4).



Table 4. Functional limitations rated as occurring with the most frequency among youth in Liberia ( $n = 171$ ).<sup>a</sup>

Variable	Mean	(SD)
Children (5–12 years of age)		
Chores at home/housework	2.83	(0.95)
School achievement/performance at school	2.80	(0.95)
School attendance (truancy)	2.74	(0.94)
Learning	2.63	(0.98)
Getting enough food	2.54	(1.02)
Fulfilling their roles within the family	2.52	(1.00)
Self-care/personal hygiene	2.48	(1.02)
Trusting and relying on adults	2.41	(1.33)
Physical health	2.25	(0.99)
Social interactions and maintaining friendships	1.98	(1.19)
Sports	1.04	(1.14)
Adolescents/young adults (13–22 years of age)		
Access to income and living expenses	3.15	(0.95)
Spouse/marriage problems	3.04	(0.99)
Parenting	3.02	(0.88)
Fulfilling their roles within the family	2.83	(0.97)
Vocational skills	2.73	(1.11)
Keeping a job	2.72	(1.07)
Age appropriate independence	2.71	(1.07)
Offering help to others	2.42	(1.15)
Forming intimate (close) relationships	2.32	(1.20)

Notes: <sup>a</sup> Likert scale response to question ‘To what degree do young people in Liberia have difficulty with the following issues?’ Response options were 0 = not at all; 1 = a little; 2 = somewhat; 3 = quite a lot; 4 = extremely.

Table 5. Settings rated as being the most appropriate settings for providing mental health treatment to youth in Liberia ( $n = 171$ ).<sup>a</sup>

Setting	Children (Aged 5–12) (%)	Adolescents (Aged 13–18) (%)	Young adults (Aged 19–22) (%)
Medical clinic	85.9	82.9	85.9
Home visit	68.8	73.5	71.2
Sports	66.5	74.7	73.5
School	64.7	64.1	62.4
With a family elder	60.6	64.7	64.7
Non-governmental organization	55.3	58.8	62.4
Church/Mosque	49.4	61.8	67.1
With a community leader	37.1	47.6	59.4
Volunteer program	36.5	69.4	77.1
Non-medical clinic	35.3	47.1	48.2
Traditional healer	24.1	34.1	42.4
Work	22.9	45.9	68.2

Note: <sup>a</sup> Response to question ‘Which of the following settings are best for the care of the mental health problems of children, adolescents, and young adults in Liberia?’

Data on the KIs' assessment of the most appropriate setting for mental health care of children, adolescents and young adults in post-conflict Liberia was also analyzed. Medical clinics, home visits and sport arenas were cited by respondents as appropriate treatment settings for all age groups, and volunteer and work programs were also preferred settings for adolescents and young adults (Table 5).

## Discussion

This study explored the mental health needs of young Liberians using a quantitative survey with local KIs. The KIs' ratings affirmed that exposure to conflict and war, extreme fear and witnessing atrocities had severe negative impacts on the emotional health of Liberian youth during the civil war. Numerous studies have documented the association between exposure to war-related traumatic events and poor mental and physical health outcomes, namely substance abuse, major depressive disorder, PTSD, social dysfunction and suicidal ideation or attempts among youth in post-conflict societies (Johnson et al., 2008; Medeiros, 2007).

Unfortunately, most of the world's youth living in post-conflict settings are also exposed to additional types of adverse childhood experiences that may be due in part to the numerous socioeconomic disadvantages that are characteristic of many LMICs, and that may be exacerbated or caused by armed conflict (Miller & Rasmussen, 2010). In addition to coping with the psychological and emotional impact of direct war-related experiences, young people in Liberia continue to endure the harsh social, economic and material conditions of everyday life in a protracted post-conflict state. The KIs reported that severe stressors such as poverty and starvation, sexual violence, domestic violence, loss of home and the death of parents have detrimental emotional impacts. Moreover, these stressors continued to negatively impact the emotional wellbeing of youth long after the war ended. Additionally, other post-conflict stressors such as infectious disease, early marriage and neglect by parents and guardians were daily hardships that were reported to be further compromising youth mental health problems.

The most significant mental health needs for children, adolescents and young adults included both externalizing (i.e., drug and alcohol use, bullying others and delinquent behavior) and internalizing (i.e., lack of motivation, sadness/depression, suicidal thoughts, hopelessness, poor concentration and nervousness/worry) symptoms and behaviors. While these symptoms have been consistently documented in youth exposed to childhood adversity and exposure to traumatic experiences, these findings should be viewed in the context of the total breakdown of many protective communal, family and societal structures. These findings caution against a simplistic characterization of the mental health needs of young people based only on the direct effects or exposures to war and trauma, and underscore that psychological needs are complex and interwoven in the economic and social fabric of the country.

While internalizing and externalizing mental health symptoms and behaviors are concerning in and of themselves, their impact on functional impairment and disability is another tragic outcome. In post-conflict societies, particularly those in LMICs, poor educational attainment, poverty and physical health is often discussed as stemming almost exclusively from lack of access to physical and human resources and infrastructure. However, our results suggest that even when opportunities may exist, Liberian youth experience functional impairment due to mental health issues that further limits their

ability to access these critically important resources. The KIs indicated that due to emotional and behavioral problems, children aged 5 to 12 were having difficulty attending and performing at school, getting enough food, engaging in self-care, personal hygiene and activities that promote physical health, having and maintaining positive relationships and completing their housework. Adolescents and young adults were experiencing challenges in parenting, accessing money for living expenses, working, having healthy relationships with their spouses and forming intimate relationships.

These disruptions in functioning and their associated mental health concerns may act in a negative feedback loop, with poor mental health promoting poor functioning, and poor functioning exacerbating poor mental health. Indeed, research has suggested that protective factors such as access to education, family connectedness, community acceptance and economic skills play a significant role in the psychosocial adjustment of youth exposure to war-related traumatic events (Betancourt, Brennan, et al., 2010; Betancourt & Khan, 2008). The poor mental health and high functional limitations identified in this study have serious implications not only for the psychological and emotional health of the youth themselves, but also for the wellbeing of the next generation and for the development of the country. Addressing the mental health needs of the post-conflict generation is critical for the future of Liberia.

The KIs in this study reported high mental health needs and related functional impairment of Liberian youth, but few formal mental health services are available in post-conflict Liberia. As a first step towards the government's mental health policy, one of the goals of the needs assessment was to identify existing settings that would be most appropriate for delivering mental health services in the future. The results of the assessment found that KIs believed that medical clinics are the most important venue for serving children, adolescents and young adults. Additionally, KIs also believed that volunteer and work programs would be appropriate settings for serving young adults (aged 19–22), while home visits and sport activities might be appropriate for youth of all ages. Notably, schools, NGOs, religious organizations, community leaders and traditional healers were deemed as less appropriate ways to reach Liberian youth to provide mental health services.

Although medical clinics were consistently rated as the most appropriate settings for mental health care delivery, results from a population-based study examining health and mental health outcomes in post-conflict Liberia found that access to health care is poor. Approximately 30% of the population lacks access to a clinic or hospital within a four-hour walking distance (Johnson et al., 2008). This suggests that although medical settings appear to be the most appropriate to address mental health issues, alternative delivery models (e.g. community-based settings) must be given closer attention in both research and service delivery. These findings have implications for organizations seeking to provide mental health services to youth in Liberia, and suggest that finding ways to support and integrate mental health services into existing medical, volunteer, work and sports programs, while also promoting home visiting and community-based models, may be most successful at reaching youth in Liberia. For example, the relationships that former child soldiers have with their communities is fundamental to improving their mental health outcomes (Betancourt, Newnham, McBain, & Brennan 2013). Former child soldiers face stigma and potential violence from the community, and are also vulnerable to economic insecurity and interpersonal hardship (Betancourt, Newnham et al. 2013). In one study, community members were trained to monitor and help facilitate successful reintegration, as this

transition period is an imperative time in which mental health problems can worsen if children do not receive suitable care (Betancourt, Borisova et al. 2010). Even though there is limited access to mental health care in LMICs, family and community acceptance of child soldiers has been associated with lower PTSD and depression scores, signifying the importance of the family and the community (Betancourt, Newnham et al. 2013; Betancourt, Borisova et al. 2010). Another study showed that perception of community acceptance alone helped improve childrens' feelings of social isolation and decreased internalization problems (Betancourt, McBain et al. 2013).

These findings should be interpreted in light of some methodological and contextual considerations. First, government and NGO officials affiliated with the MOHSW selected the KIs who participated in this survey; as such, some of these individuals or their organizations were key stakeholders in the development of the National Mental Health Policy and their responses might have been biased. Second, the sample consisted almost exclusively of professional Liberians. As a result, respondents' views of the needs of the young people may not be generalized to the entire adult population. In addition, the current sample is not entirely diverse in terms of their socioeconomic status. Subsequently, the results obtained from a more representative sample of adults in the community could potentially reflect different priority areas for youth in Liberia. Finally, the results do not represent young people's own perspective as interviewees were on average 43 years of age, with the youngest being 23 years old. Although it would have been ideal, it was not possible to allow youth participation in this study. At the time of the study, psychiatric resources needed to handle psychological and psychiatric trauma stemming from the war, which could be exacerbated by involvement in this study, were not available. It is hoped that with an increase in availability of psychiatric services, future studies aimed at exploring the specific needs of the youth in Liberia's post-conflict environment will be undertaken.

Although child and adolescent mental health in post-conflict societies has gained increased research attention over the last decades, there is still a serious lack of systematic empirical information about war-affected children and youth. Our KIs' perceptions of the mental health needs of young people in Liberia are consistent with research on the harmful effects of war, violence and displacement on child and adolescent populations. In the absence of prevalence rates, research and mental health services, this study showed a culturally-appropriate way in which researchers could identify the needs of targeted groups in a rapid and cost-effective manner. Further research on the mental health needs of young people, the causes of distress, factors underlying both vulnerability and resilience and the best practices to address these needs in the wake of war is of paramount importance to the development of the country and its transition out of a post-conflict state.

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